AMENDMENTS TO THE SPECIFICATION:

PLEASE ENTER THE FOLLOWING AMENDMENTS:

[0111] ~~21. Method~~ One embodiment takes the form of a method for the reconditioning of a friction pair ~~according to claim 20, characterized in that~~ as described herein and in which the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a further choice between a fourth operating mode (53) in which the service brake is prioritized and the service brake is used on individual wheel axles, and a fifth operating mode (54) in which a fault message is emitted or enforced braking occurs using the service brake.

[0112] ~~22. Method for the reconditioning of a friction pair according to any of claims 1 to 19, characterized in~~ The method further includes that the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a choice between a first operating mode (50) in which the auxiliary brake is prioritized, a second operating mode (52) in which the service brake is prioritized, the method comprising the following stages determination of a parameter value (I) for a reconditionable surface characteristic, such as the coefficient of friction, dirt or rust covering of the friction pair selection of the operating mode as a function of the said parameter value determined.

[0113] ~~23. Method for the reconditioning of a friction pair according to claim 22, in which~~ In another aspect, the vehicle comprises a plurality of wheel axles each carrying service brakes, characterized in that the control system (11) for the distribution of a requested brake power between the said service brake and secondary brake further comprises: a third operating mode (51) in which the auxiliary brake is prioritized and the service brake is used on individual wheel axles in the event that the service brake is used despite the prioritization of the auxiliary brake. ~~24. Method for the reconditioning of a friction pair according to claim 23, characterized in that~~ In still another aspect, the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a further choice between a fourth operating mode (53) in which the service brake is prioritized and the service brake is used on individual wheel axles, and a fifth operating mode (54) in which a fault message is emitted, or enforced braking occurs using the service brake.

[0114] ~~25. Vehicle comprising~~ In another embodiment, the vehicle comprises a service brake (2) of the drum or disc brake type, one or more auxiliary brakes (10), a control system (11) for the distribution of a requested brake power between the said service brake (2) and auxiliary brake (10) and an arrangement for the reconditioning (15, 16) of a friction pair (3) comprising a lining and a rotor forming part of the said service brake, characterized in that the said reconditioning arrangement comprises: means (15) for determining a parameter value (I) of a reconditionable surface characteristic, such as the coefficient of friction, dirt or rust covering of the friction pair, for example means (16) for supplying a defined braking energy (E) to the said friction pair as a function of the said parameter value determined.

[0115] ~~26. Vehicle according to claim 25, characterized in that~~ In a complimentary aspect, the vehicle further comprises an element for determining the temperature (14) of the friction pair (3) and that said means (16) for supplying a defined braking energy is arranged to supply the said defined braking energy (E) at a temperature of the said friction pair (3) which exceeds a defined regeneration temperature, thereby permitting reconditioning of the said friction pair.

[0116] ~~27. Vehicle according to claim 25 or 26, characterized in that the said~~ In a complimentary aspect, the parameter value is a function of the coefficient of friction of the friction pair.

[0117] ~~28. Vehicle according to claim 27, characterized in that said~~ In a complimentary aspect, the means for determination (15) of the coefficient of friction is arranged to calculate the coefficient of friction from data on the force with which brake linings are applied against the rotor and retardation is estimated from a retardation test, in which linings forming part of the said service brake are applied with a defined force against the said rotor, following which the retardation of the vehicle is measured.

[0118] ~~29. Vehicle according to claim 27, characterized in that said~~ In a complimentary aspect, the means for determination (15) of a coefficient of friction is arranged to calculate the coefficient of friction from data on the force with which brake linings are applied against the rotor and retardation is estimated from an acceleration test, in which brake shoes forming part of the said service brake are applied with a defined force against the said rotor and an engine forming part of the vehicle is made to deliver an additional torque, following which the acceleration of the vehicle is measured.

[0119] ~~30. Vehicle according to claim 29, characterized in that the said~~ In a complimentary aspect, the additional torque is suited to maintaining the speed of the vehicle.

[0120] ~~31. Vehicle according to any of claims 25 to 30, characterized in that the said~~ In a complimentary aspect, the parameter value is a function of the dirt and/or rust covering of the friction pair.

[0121] ~~32. Vehicle according to any of claims 25 to 31, characterized in that said~~ In a complimentary aspect, the means (15) for determining a parameter value (I) for a reconditionable surface characteristic is arranged to estimate the parameter value for the reconditionable surface characteristic from a set of the following parameters: time of year, geographical location, climate zone, atmospheric humidity, outdoor temperature, design of road network, fuel consumption, engine running time, total engine revolutions, distance covered, distance covered since last braking, distance covered since last reconditioning, time since last braking, time since last reconditioning, supply of braking energy, retardation history, application force of the brake system, temperature of the friction pair, bearing temperature and temperature of friction material fitted to brake shoes.

[0122] ~~33. Vehicle according to claim 32, characterized in that said~~ In a complimentary aspect, the parameter value (I) for the reconditionable surface characteristic is estimated from the said set of parameters through the formation of a function $I_{n+1}=I_n+\sum \alpha_A c_A$, where I_{n+1} is the current value of the parameter value and α_A is a weighted function for a parameter c_A.

[0123] ~~34. Vehicle according to claim 33, characterized in that the said~~ In a complimentary aspect, the function is divided into a first sub-function I_{Gn+1}-$I_{Gn}+\sum \alpha_A c_{GA,}$ where I_{Gn+1} is the current value of the parameter value representing glazing and α_A represents a set of coefficients for a number of parameters c_{GA} which influence the glazing of the friction pair, and a second sub-function I_{Sn+1}-$I_{Sn}+\sum \beta_{A^c SA1}$, where I_{Sn+1} is the current value of the parameter value representing dirt and/or rusting and β_A represents a set of coefficients for a number of parameters c_{SA} which influence the dirt and/or rusting of the friction pair.

[0124] ~~35. Vehicle according to claim 33 or 34, characterized in that~~ In a complimentary aspect, the reconditioning part of the said function and/or sub-function are described as $C_{Grek} = E^{\gamma}\left(T - Tcr\right)^{\delta}$, when T>Tcr, where E is represented by the input brake energy at a temperature T and Tcr is represented by a temperature limit at which reconditioning starts to take effect.

[0125] ~~36. Vehicle according to any of claims 25 to 35, characterized in that said~~ In a complimentary aspect, the means (14) for determining the temperature of the said friction pair is arranged to determine a current temperature value through information on use of the service brake in which a temperature margin, proportional to the energy supplied in each braking, is added to a previously current temperature value and a continuous temperature reduction is added in as a function of the said previously current temperature value and the time.

[0126] ~~37. Vehicle according to any of claims 25 to 35, characterized in that said~~ In a complimentary aspect, the means for determining the temperature comprises a temperature sensor, which detects the temperature of the friction pair, or an element which is thermally coupled to the friction pair.

[0127] ~~38. Vehicle according to any of claims 25 to 37, characterized in that the said~~ In a complimentary aspect, the defined braking energy corresponds to an amount of energy that returns the value of the parameter value of the said friction pair to a defined limit.

[0128] ~~39. Vehicle according to any of claims 25 to 38, characterized in that said~~ In a complimentary aspect, the means (16) for supply of a defined braking energy is arranged to commence reconditioning when the parameter value of the said reconditionable surface characteristic is less than a defined limit.

[0129] ~~40. Vehicle according to claim 39, characterized in that the said~~ In a complimentary aspect, the braking energy is a function of the difference between the said limit and the said parameter value for the surface characteristic.

[0130] ~~41. Vehicle according to any of claims 25 to 40, characterized in that said~~ In a complimentary aspect, the means (16) for supplying a defined braking energy is arranged to communicate with the said control system for the distribution of a requested brake power between the said service brake and secondary brake, following which the brake power supplied via the said service brake is prioritized in relation to brake power supplied via the said secondary brake, thereby ensuring sufficient energy for regeneration.

[0131] ~~42. Vehicle according to any of claims 25 to 41, characterized in that~~ In a complimentary aspect, the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a choice between a first operating mode (50) in which the auxiliary brake is prioritized, a second operating mode (52) in which the service brake is prioritized, the method comprising the following stages: determination of a parameter value (I) for a reconditionable surface characteristic, such as the coefficient of friction, dirt or rust covering of the friction pair-selection of the operating mode as a function of the said parameter value determined.

[0132] ~~43. Method for the reconditioning of a friction pair according to claim 42, in which~~ In a complimentary aspect, the vehicle comprises a plurality of wheel axles each carrying service brakes, characterized in that the control system (11) for the distribution of a requested brake power between the said service brake and secondary brake further comprises: a third operating mode (51) in which the auxiliary brake is prioritized and the service brake is used on individual wheel axles in the event that the service brake is used despite the prioritization of the auxiliary brake.

[0133] ~~44. Method for the reconditioning of a friction pair according to claim 43, characterized in that~~ In a complimentary aspect, the control system for the distribution of a requested brake power between the said service brake and auxiliary brake presents a further choice between a fourth operating mode (53) in which the service brake is prioritized and the service brake is used on individual wheel axles, and a fifth operating mode (54) in which a fault message is emitted, or enforced braking occurs using the service brake.

[0134] ~~45. Vehicle according to any of claims 25 to 41 in which~~ In a complimentary aspect, the vehicle comprises a plurality of wheel axles each carrying service brakes, characterized in that said means (16) for the supply of a defined braking energy is arranged to communicate with the said brake power distribution control system, according to which brake energy supplied is distributed between the said plurality of wheel axles.

[0135] ~~46. Vehicle according to claim 45, characterized in that the said~~ In a complimentary aspect, the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a choice between a first operating mode (50) in which the auxiliary brake is prioritized, a second operating mode (51) in which the auxiliary brake is prioritized and the service brake is used on individual wheel axles in the event that the service brake is used despite the prioritization of the auxiliary brake, this being done where the requested brake force exceeds a first limit, and a third operating mode (52) in which the service brake is prioritized.

[0136] ~~47. Vehicle according to claim 46, characterized in that~~ In a complimentary aspect, the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a further choice between a fourth operating mode (53) in which the service brake is prioritized and the service brake is used on individual wheel axles, and a fifth operating mode (54) in which a fault message is emitted or enforced braking occurs using the service brake.

[0137] ~~48. Vehicle according to any of claims 25 to 47, characterized in that said~~ In a complimentary aspect, the means (16) for supplying the said defined braking energy is arranged to supply a defined braking energy within a temperature interval at a temperature of the friction pair which exceeds a regeneration temperature limit and is less than a temperature limit T_G at which a solid wear-resistant covering forms on the friction pair.

[0138] ~~49. Method~~ In yet a further embodiment, the invention takes the form of a method for the reconditioning of a friction pair (3) comprising a lining and a rotor in a service brake of the drum or disc brake type forming part of a brake system in a vehicle, which in addition to the said service brake comprises one or more auxiliary brakes (10) and a control system (11) for the distribution of a requested brake power between the said service brake and secondary brake, in which the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a choice between: a first operating mode (50) in which the auxiliary brake is prioritized, a second operating mode (52) in which the service brake is prioritized, the method comprising the following stages: determination of a parameter value (I) for a reconditionable surface characteristic, such as the coefficient of friction, dirt or rust covering of the friction pair, for example selection of the operating mode as a function of the said parameter value determined.

[0139] ~~50. Method for the reconditioning of a friction pair according to claim 49, in which~~ In a complimentary aspect, the vehicle comprises a plurality of wheel axles each carrying service brakes, characterized in that the control system (11) for the distribution of a requested brake power between the said service brake and secondary brake further comprises: a third operating mode (51) in which the auxiliary brake is prioritized and the service brake is used on individual wheel axles in the event that the service brake is used despite the prioritization of the auxiliary brake.

[0140] ~~51. Method for the reconditioning of a friction pair according to claim 50, characterized in that~~ In a complimentary aspect, the control system for the distribution of a requested brake power between the said service brake and secondary brake presents a further choice between a fourth operating mode (53) in which the service brake is prioritized and the service brake is used on individual wheel axles, and a fifth operating mode (54) in which a fault message is emitted, or enforced braking occurs using the service brake.